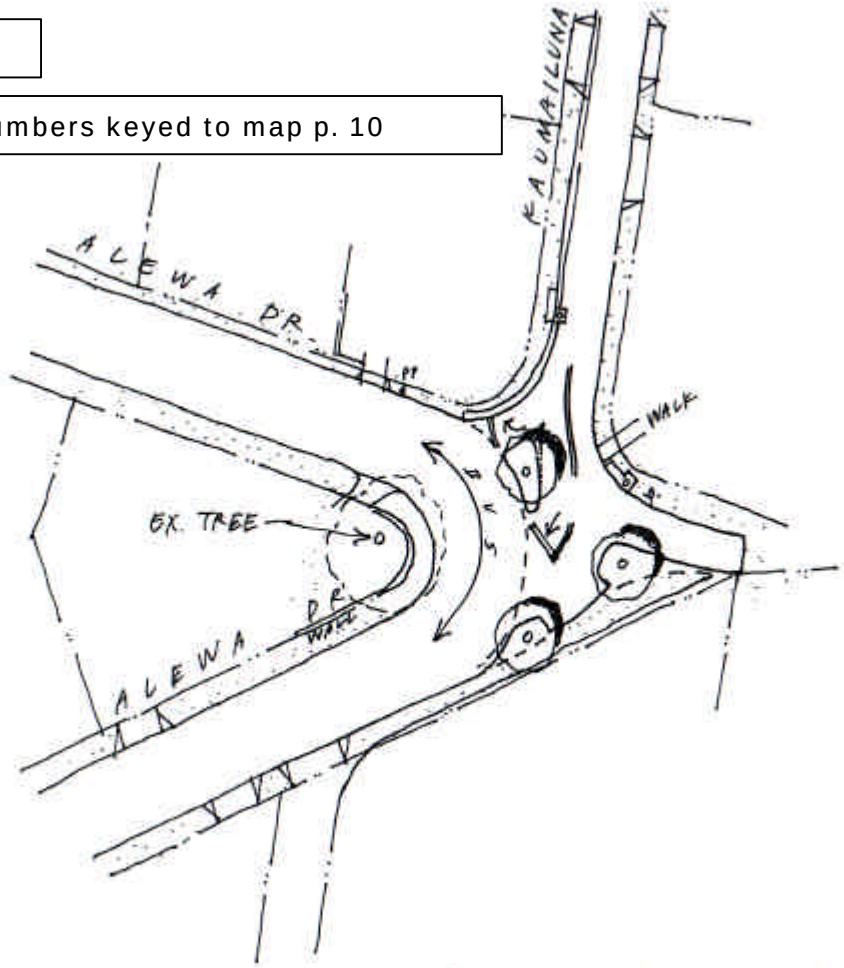
Location 1

Location numbers keyed to map p. 10

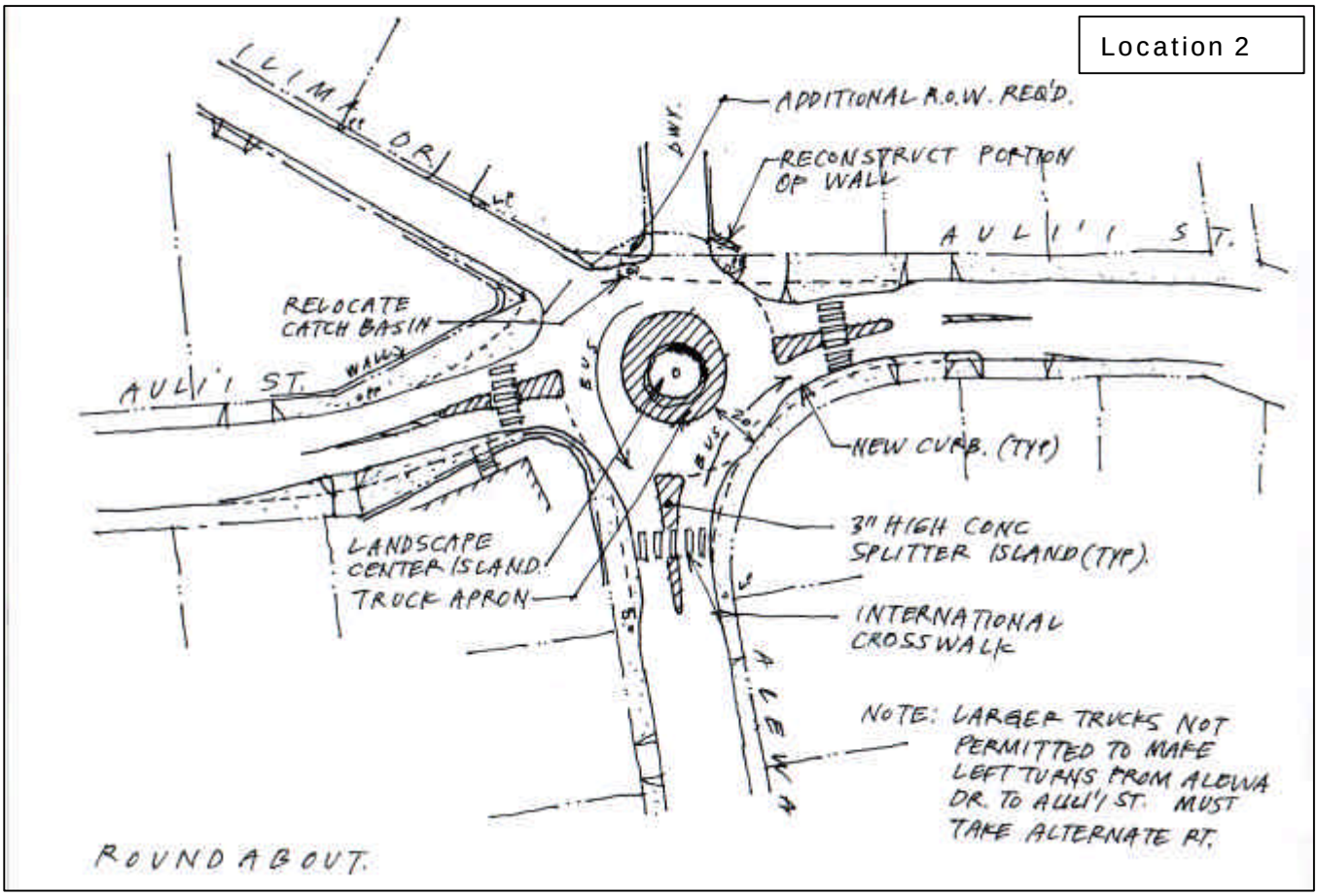


MODIFIED INTERSECTION

Residents requested a roundabout at the hairpin turn on Alewa where it intersects with Kaumailuna Street (**Location 1 on map, p.10).** Several schemes were developed to install a roundabout at this site, as it was thought that this intersection was inadequate and warranted some major improvements. Regretfully, the available room at the intersection for a roundabout was inadequate. Moreover, the slope at this intersection is too steep for a roundabout to sit squarely and be as visible as is necessary from all directions on approach to the intersection.

Instead, the modified intersection would have the stop bar for Kaumailuna Street moved farther out into the intersection and be protected with a landscaped island. This would clarify travel lanes, improve sightlines for cars entering from Kaumailuna Street. The area of the intersection that is now used for parking would be better identified as parking with bulbouts and landscaping.

Note: The map on p.10 mislabels the lower leg of this intersection as Aulii Street; residents observed that it is really a continuation of Alewa Drive. Since this is an older section of Honolulu with a rather convoluted road network, accurate mapping is not readily available. The individual drawings and location numbers should be used to locate the devices.

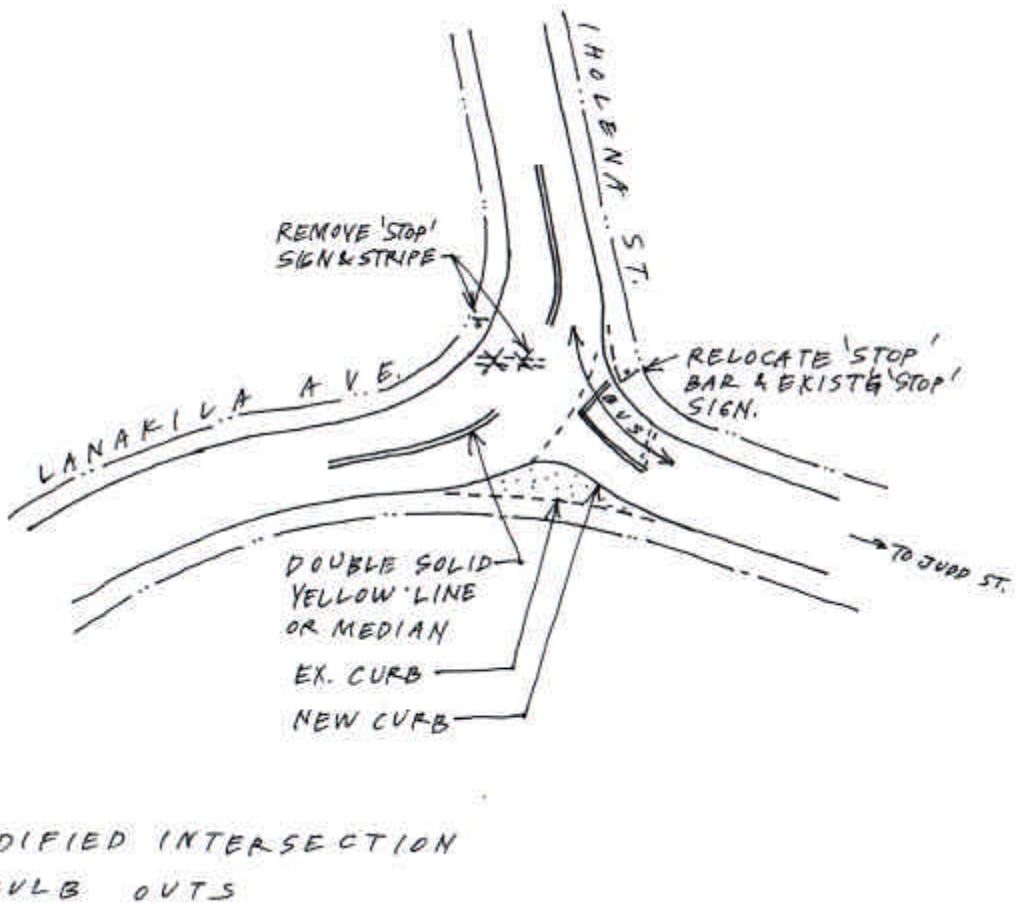


The intersection of Alewa Drive, Aulii Street, and Ilima Drive (**Location 2**) is a typical example of the intersections found in the upper parts of Palama. Residents recommended a roundabout as an appropriate solution to the convergence of roads in quickly changing topography.

The traffic calming teaming found this would work well. A roundabout will significantly reduce the confusion about which vehicle should go first. It would slow traffic through the intersection by creating a physical and visual barrier, and by reducing the wide expanse of asphalt.

This was a tricky roundabout to design because several utilities and stormwater catch basins would need to be relocated. A little extra right of way is required for the construction and a retaining wall would have to be moved a few feet back. In order for TheBus and trucks to turn left from Aulii onto Alewa Drive, the center island was offset slightly so that larger vehicles could get around it. Cars and other passenger vehicles should not have any trouble making the turn. Larger trucks would not be able to make left turns from Alewa Drive onto Aulii Street, and would have to take an alternate route.

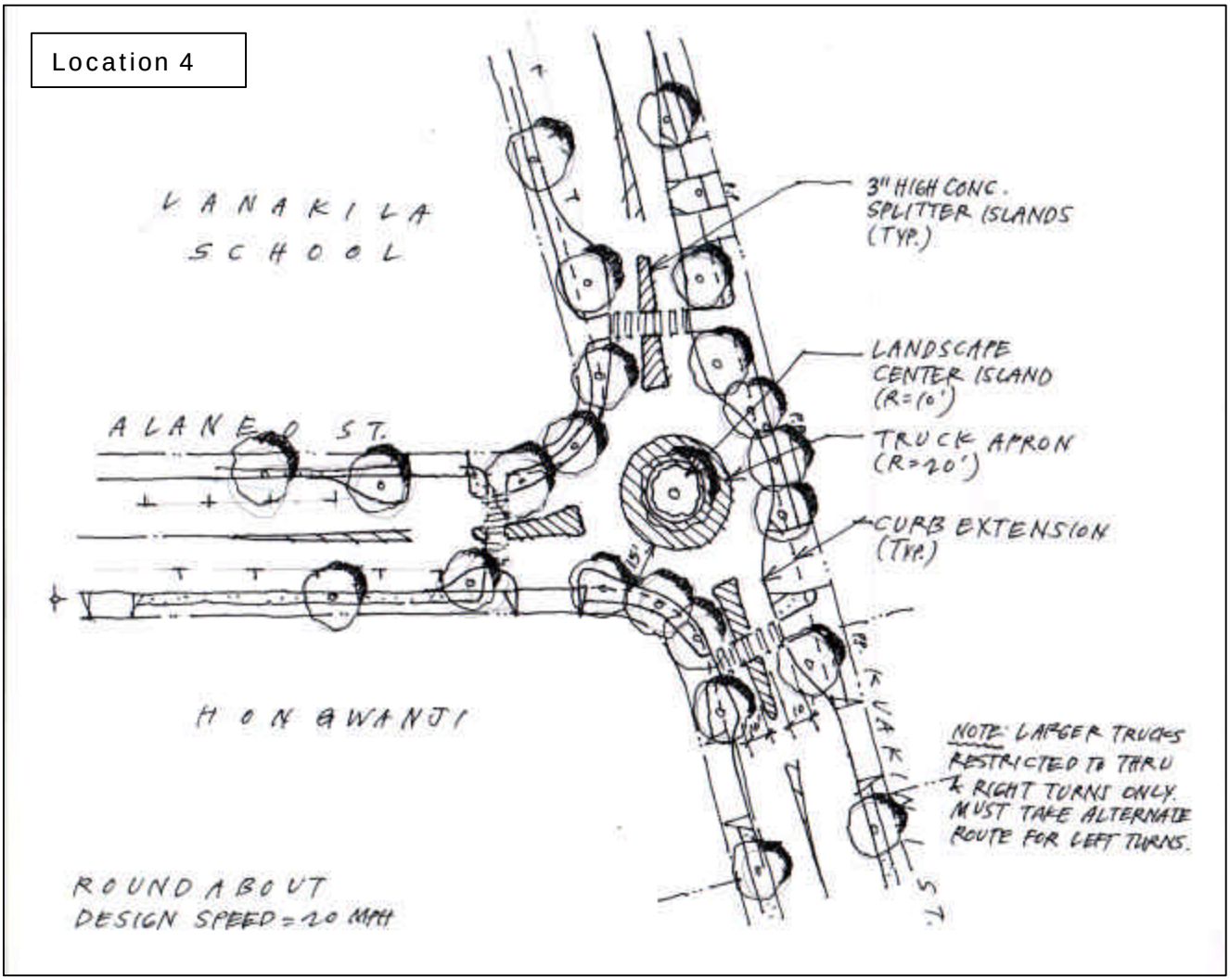
Location 3



For **Location 3** at Lanakila Ave. and Iholena Street, residents voiced their concern that people do not stop for the existing stop sign on Iholena, which creates confusion and has resulted in several minor accidents. The residents' comments and the team's site inspections indicated that the majority of the traffic on Lanakila turns mauka to go up into the neighborhood (heading up toward the top of drawing above), and not continuing on straight to Judd.

To make the actual stopping pattern a more natural progression, a new curb extension would be added at the makai end of the intersection. The existing stop sign and stop bar where Iholena St meets Lanakila Ave would be removed. A narrow raised median or double yellow line would be installed to direct traffic appropriately through the intersection.

Residents felt this was an important change and ranked it number four on their list of priorities in a package with the roundabout at Luka, Judd and Lanakila.



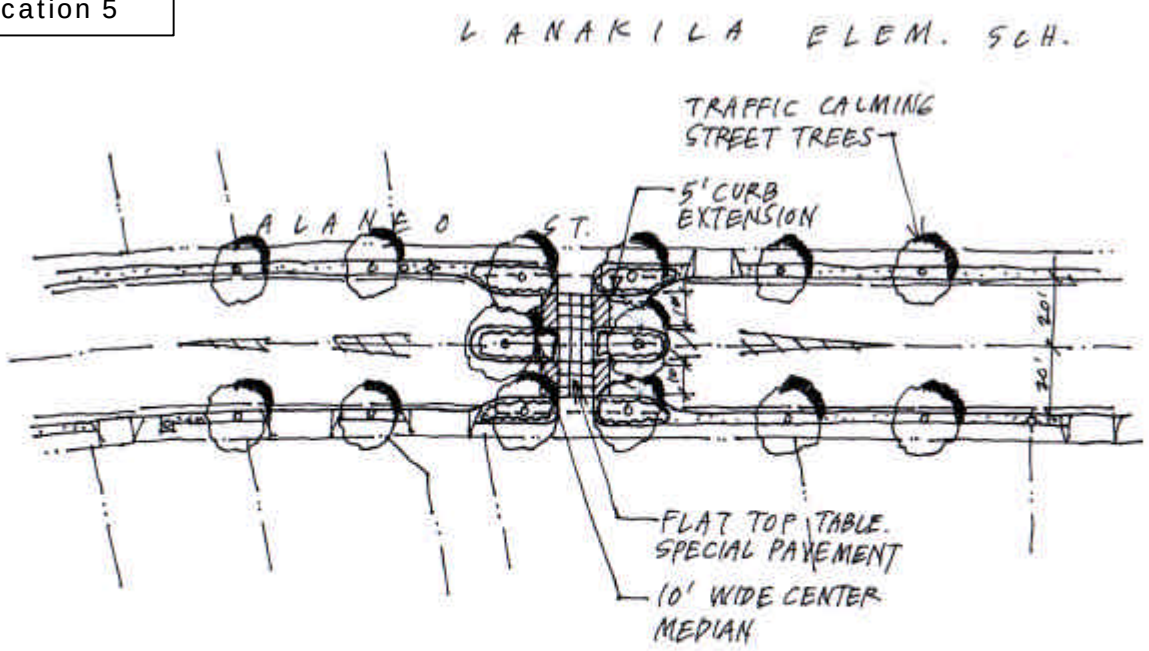
This design at **Location 4** was ranked as the residents' top priority. There is a considerable amount of cut-through traffic that speeds through the intersection of Kuakini Street and Alaneo Street to avoid the traffic signal at School Street and Liliha. This is the location of a school and playground, which further increases the need for an effective treatment.

The residents and traffic calming team agree that a roundabout is the best solution for this location. The roundabout would continue to serve large amounts of traffic, but people will think twice before cutting through the neighborhood because they will no longer be able to speed through the turn. The roundabout is engineered for a design speed of 20 miles per hour.

The roundabout would have curb extensions and median splitter islands to improve crossing for pedestrians, including area school children. The location could be heavily landscaped to improve the aesthetic value of the area and decrease traffic noise.

Since there is already a traffic signal warranted and funded for this location, residents suggested that this roundabout be a priority only if the signal funding could be reprogrammed for construction of the roundabout.

Location 5

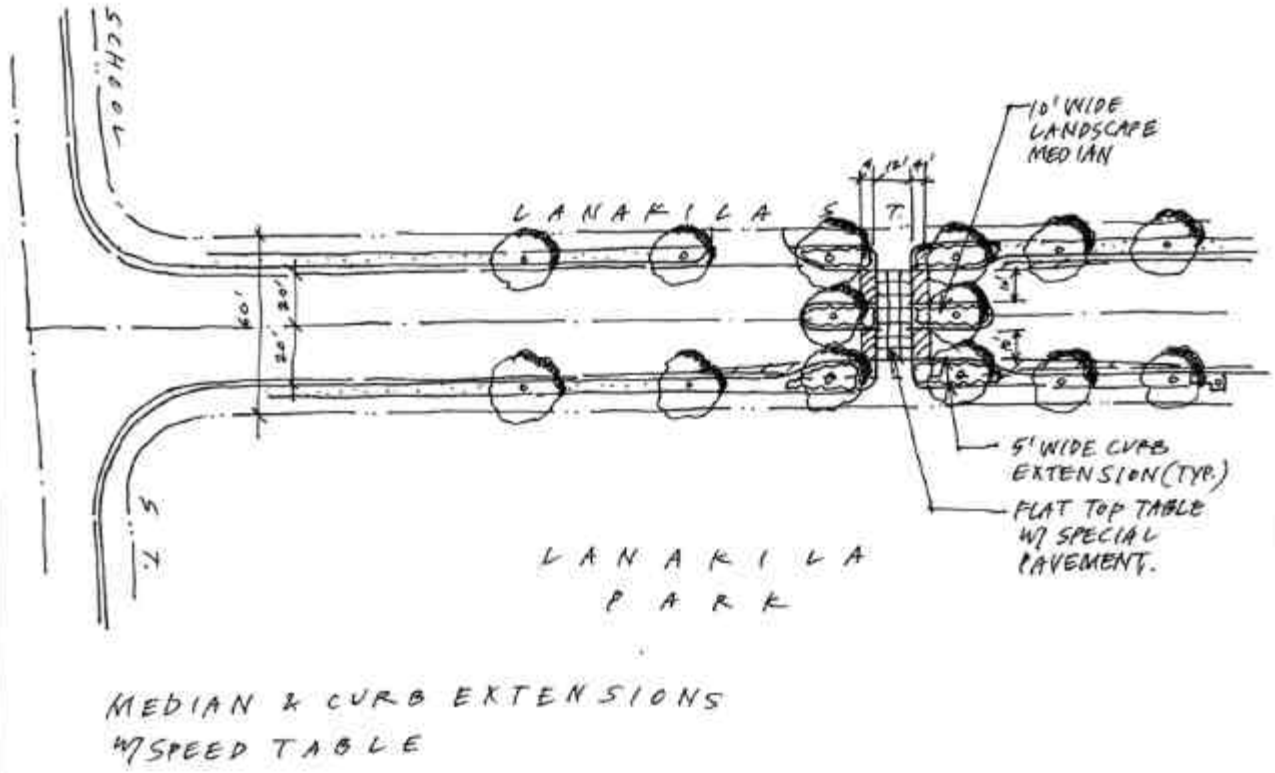


MEDIAN & CURB EXTENSIONS W/ SPEED TABLES.

The Traffic Calming Team designed a flat top speed table for the existing crosswalk on Alaneo Street (**Location 5**). This would have a median, which would act as a pedestrian refuge, and curb extensions to reduce the crossing distance and give pedestrians better sightlines to oncoming traffic. The speed table itself could be pavers (rough surface) or colored concrete. The table should be 10 feet wide. The curb extensions would extend 5 feet from the existing curb line. Parking should be limited for 20' on either side of the crosswalk.

Residents felt this treatment did not need to be on the priority list for immediate implementation <u>if</u> the roundabout at Kuakini and Alaneo (just up the street) was installed. They felt the roundabout would provide the needed safety for this area, and wanted to use available funds in several other locations throughout the neighborhood. If the roundabout is not installed, they felt this crosswalk should be added to the priority list.

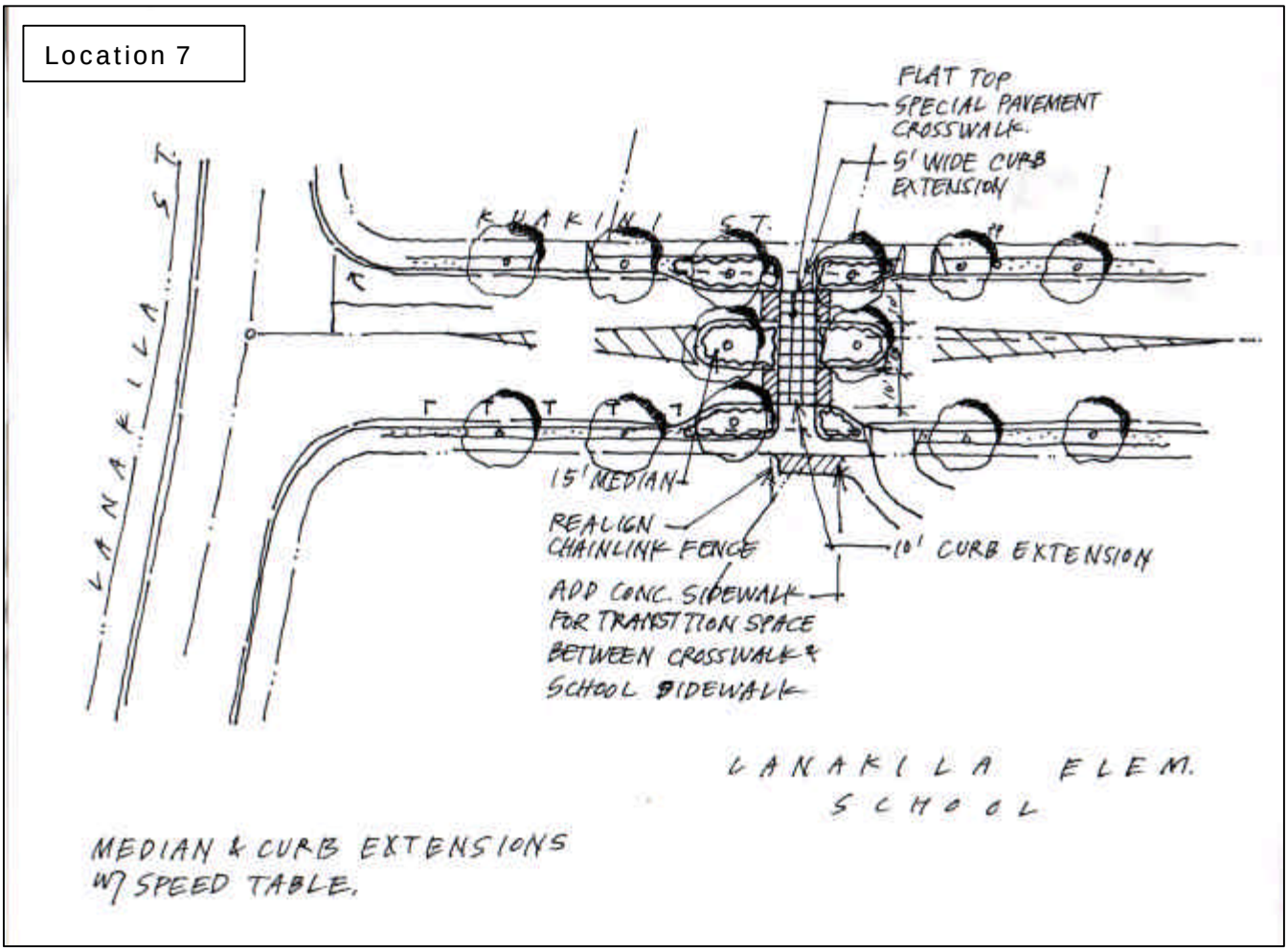
Location 6



The flat top speed table designed for **Location 6** on Lanakila Street is similar to the previous location. This crosswalk carries significant pedestrian traffic across a busy street between the housing development ewa of Lanakila Street to Lanakila Park.

The speed table would have a median island, which would act as a pedestrian refuge, and curb extensions to reduce the crossing distance and give pedestrians better sightlines to oncoming traffic. The speed table itself could be pavers (rough surface) or colored concrete. The table should be 10 feet wide. The curb extensions would extend 5 feet from the existing curb line. Parking should be limited for 20' on either side of the crosswalk.

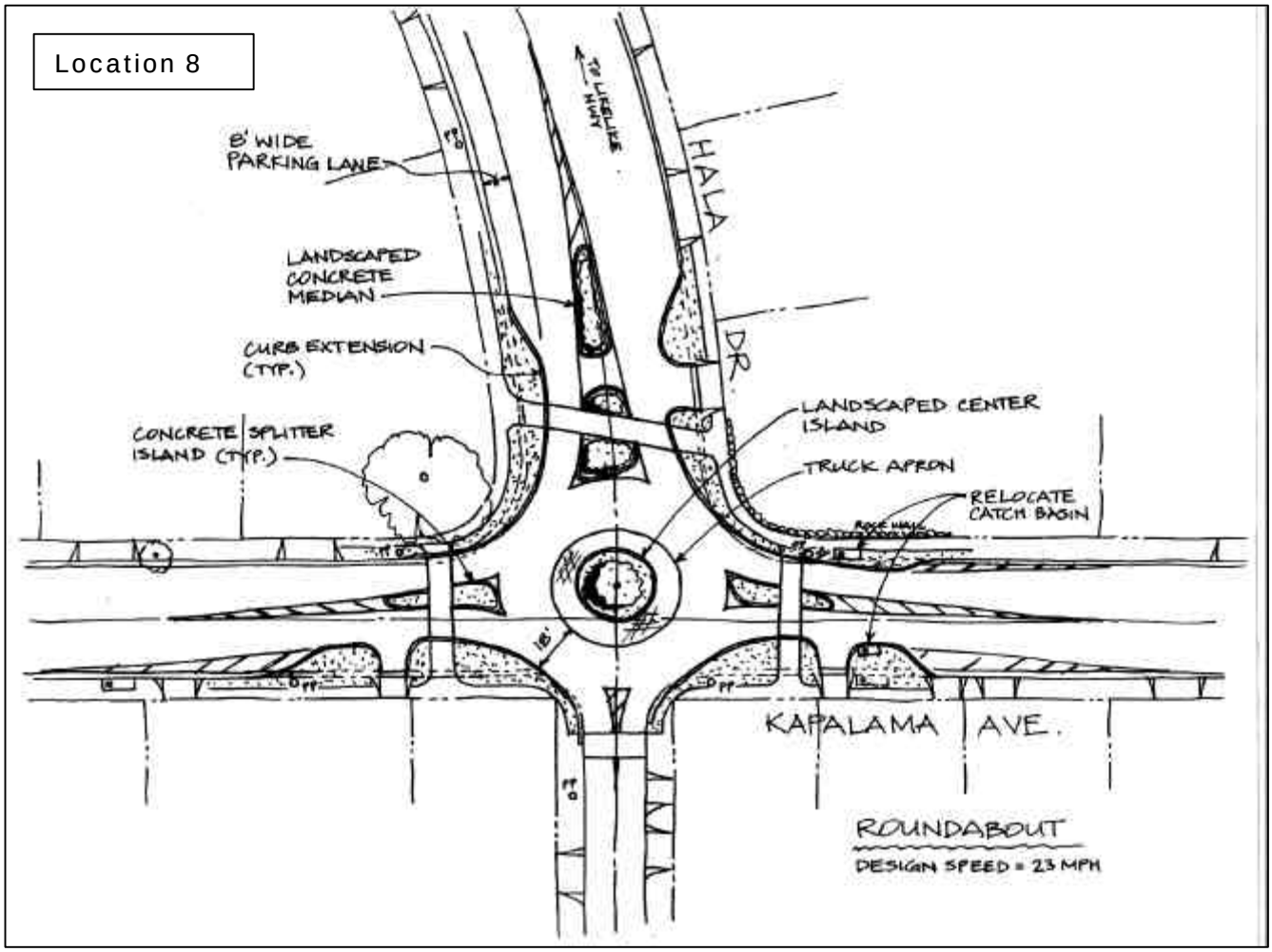
Because of the busy location and pedestrian activity, residents ranked this crosswalk location as their Number 2 priority for implementation.



Residents identified the existing Kuakini Street crosswalk to Lanakila Elementary School (**Location 7**) as a problem area during the charrette. The flat-topped speed table design was proposed as an appropriate solution. Like the preceding designs, it would have a raised median island, which would serve as a safe pedestrian refuge area. The curb extensions would safely bring pedestrians farther out towards the traffic to improve visibility for both pedestrians and motorists.

The raised speed table itself could be paved with concrete pavers or colored concrete. The table would be 10 feet wide. The curb extensions would extend 5 feet from the existing curb line on the mauka side of the road and 10-foot extensions on the makai side.

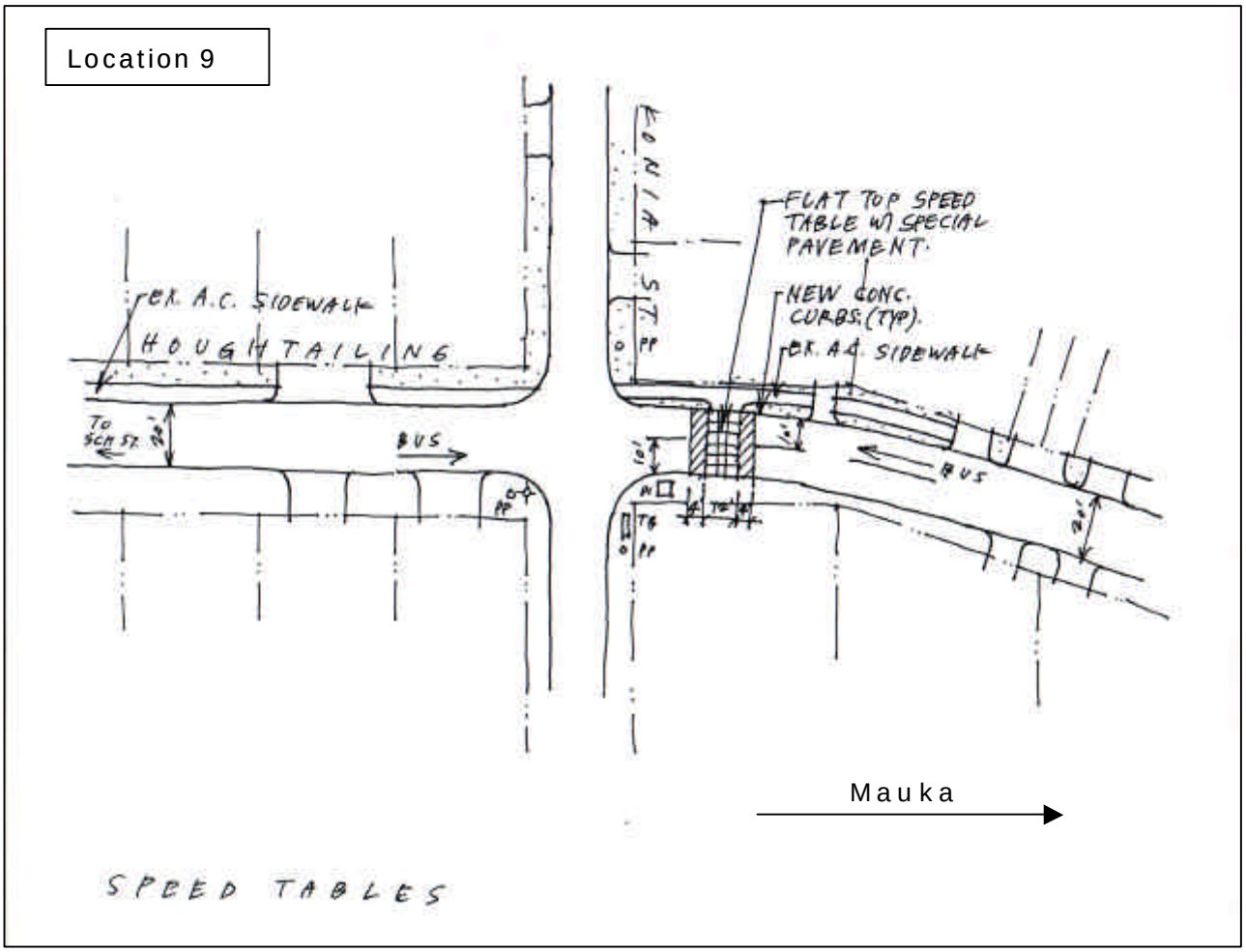
Residents liked the design for this location, but did not vote it as one of their top priorities for implementation.



This roundabout for **Location 8** was designed after the second workshop. Residents felt that their original concerns about the intersection of Kapalama Avenue and Hala Drive were not addressed. They proposed that a roundabout be installed at this location to reduce speeding by cut-through traffic from Likelike Highway. The roundabout detailed above has a design speed of 23 mph, which would allow efficient traffic flow while increasing pedestrian and driver safety at the intersection.

The landscaped center island and mountable truck apron would permit all vehicular movements. The raised concrete splitter islands on Kapalama Avenues and the landscaped island on the wider section of Hala Drive would direct motorists through the roundabout, while providing a median refuge for pedestrians. On the narrower leg of Hala Drive (bottom of drawing above), the splitter island would be painted to allow for larger vehicles to turn onto Hala Drive.

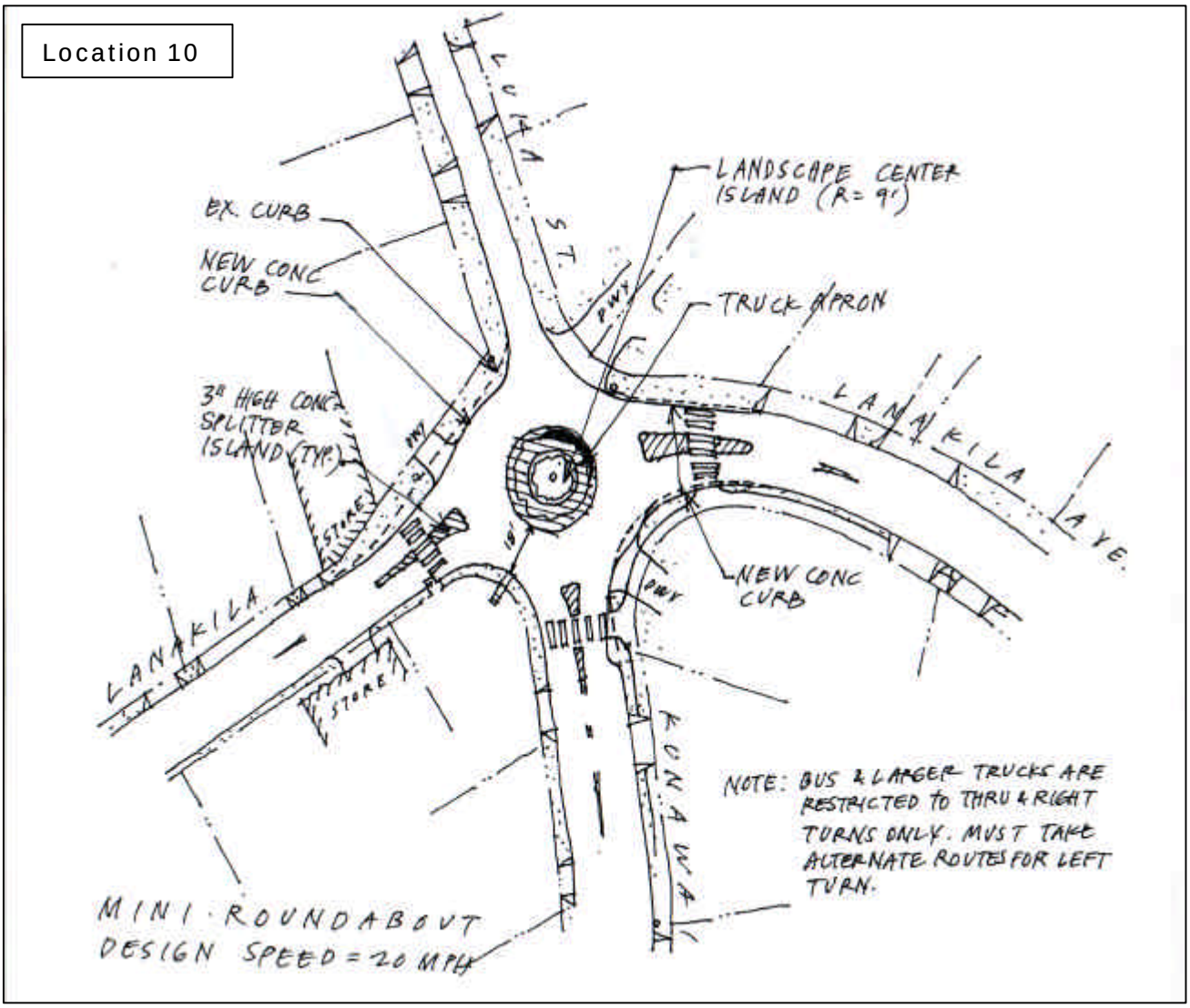
Residents selected this location as their third priority for implementation.



During the first workshop, residents told the traffic calming team that there was a great deal of speeding through the neighborhood on Houghtailing Street. Residents thought medians might help to slow traffic. The team went out to look at the area and found that there is no room for medians on Houghtailing in this area. The pavement is only 20 feet wide.

Houghtailing is a long and straight road. Motorists feel they can go faster if they have a long sight distance and do not see any significant variations in the pavement. To change this slightly, the team suggested placing a speed table on Houghtailing just mauka of Konia (**Location 9**). This will help pedestrians cross and will slow traffic by creating a vertical deflection and a visual change in the road pattern. Since this is a local bus route, discussions should be undertaken with TheBus before detailed design of the device. Flat-topped speed tables are appropriate for occasional use by buses, but are less appropriate for busy routes.

Residents' felt this was suggestion would solve the speeding problem, but did not select this location as one of the top priorities for immediate implementation.



Residents were concerned about speeding traffic cutting the corners at the intersection of Lanakila Avenue, Kunawai Street, and Luka Street (**Location 10**). A mini-roundabout was determined to be the appropriate design for this intersection because the streets do not align properly and there are several driveways that come in very close to the intersection. Roundabouts work very well in situations like this with multiple legs at different alignments.

A mini-roundabout will significantly reduce the confusion about which vehicle goes first. It will slow traffic through the intersection by creating a physical and visual barrier to speeding traffic. Since there are two neighborhood stores at this intersection (both with limited parking), the increase in pedestrian safety provided by the well-marked crosswalks and splitter islands may also benefit these neighborhood businesses. Both of the splitter islands should be mountable concrete curbs at 2 ½ to 3" high to allow maximum access by larger vehicles. TheBus and larger trucks will be restricted to through and right-turn movements, and would have to take alternate routes for left turns. The Luka Street leg is too narrow for a splitter island, and would simply receive standard roundabout yield and directional signs. Residents felt this was an important intersection, and prioritized it as #4 for implementation.

FOLLOW-UP WORKSHOP

The second neighborhood meeting was held on June 7, 2000. The purpose of this workshop was to present the designs the Traffic Calming Team had generated using the residents' input from the April 13 charrette. Several good comments were made and the Traffic Calming Team responded as follows:

Q: Is it too late to add new sites? If not, add in a roundabout at Kealia/ Kapalama and Hala Drive –People coming down Kealia speed – cut-through traffic to avoid Likelike Highway congestion. (It's actually Kapalama at Hala – Kealia turns into Kapalama). This was mentioned in the first meeting, but not included in the maps & drawings.

A: Tonight we are here to prioritize to find out about and prioritize the traffic calming measures you would like the most. If you believe there are areas that have not been addressed which would warrant a traffic calming measure, by all means, you should bring them up and we will add to the list. We will then help you identify three to five of the intersections or roadways you consider most important and rank them.

Q: What is the cost comparison between roundabouts and signals? Aren't the operating & maintenance costs higher for a roundabout than for a signal?

A. The design and construction of roundabouts has been costing the city around $250,000. Usually roundabouts can be built for costs similar to traffic signals. Many studies are now showing that maintenance costs of roundabouts are actually less than the costs associated with operating a signalized intersection.

Q: I don't like the Makiki roundabout (all the concrete). How do we make this one more attractive, and ensure continued maintenance?

A. Makiki was the first roundabout tried in Honolulu. Most of the roundabouts designed for your neighborhood would be bigger and have more room for landscaping and beautification. Of course, someone needs to care for the landscaping in any of the traffic calming devices. You will need to decide what level of landscaping the neighborhood is willing to take responsibility for.

Q. People run the stop sign at Judd & Iholena, so removing the sign is ok. The curb extension at the modified intersection (Location #3) should have a mountable curb so TheBus can get through.

A. That is a very good comment. Most of the time we design curb extensions so that buses and larger vehicles can get around them without having to drive over them. We will look into whether the bus will be able to make the turn here and if not, we'll come up with a solution.

Q: I would like a study on the relative flow of signals vs. traffic calming devices.

A: Those studies have been done. Researchers have found that roundabouts yield consistently higher flow than signals or stop signs. This is because traffic is constantly moving through the intersection. No one has to wait, sometimes for several minutes, without moving, as at many signals.

Summary

The primary objectives of this process were to: 1) identify issues and concerns, 2) come up with workable solutions, and 3) most importantly, have the residents and board members develop a sense of ownership and commitment to solve the problems that affect their safety, property values and quality of life. This is a citizen's hands-on program, working with government officials. Citizen input is essential to its success.

At the second workshop, Palama residents agreed on a prioritized list of the first four projects to be completed in their neighborhood. These intersections need the most attention, and have designs the community wants implemented.

Priorities (from 2nd workshop)

1. ***Roundabout at Alaneo and Kuakini Street*** *(see p. 14)*
2. ***Speed table on Lanakila*** *(see p. 16)*
3. ***Kapalama and Hala roundabout*** *(p.18)*
4. ***Package at Luka, Judd and Lanakila*** *(see p. 13 & p.20)*

If the funding for the Alaneo/Kuakini signal cannot be not reprogrammed for the roundabout, then residents agreed that the signal should be installed and the other speed tables around Lanakila School installed (*See p.15 & p. 17).*

Next Steps

The process used to date has led to consensus building, workable solutions, and an effective partnership between the City and neighborhood residents. The following additional steps are recommended. Following these steps provides assurance that issues will be properly addressed, costs minimized, and results will have their maximum benefit. If ownership of the problems is still weak or lacking, stay on track. The following steps are vital:

(1) Form a Palama Transportation Task Team. After the follow-up workshop several participants volunteered to get the word out to those in the neighborhood who did not attend the workshop. The team should meet regularly to help refine the plan and work through implementation strategies with city staff.

(2) Some neighbors at the meeting took it upon themselves to survey local residents (door to door) to share copies of this report, and to gain added insight and support. Other effective means of continuing to build consensus might be to conduct Open Houses at an area residence, or hold a block party or other event.

(3) To see visible changes immediately, residents should begin by being more cautious with their own driving in the neighborhood

(4) Once a construction budget is allocated, schedule final engineering designs and construction of improvements.

(5) Several of the recommendations included new landscaping features. At the meeting residents indicated that they would be interested in medium to high levels of landscaping. They also suggested working with neighborhood businesses to adopt the traffic calming measures for maintenance. The Transportation Task Team should work with residents to determine who will care for the new treatments, and enter into a Neighborhood Maintenance Agreement with the City.